

REMARKS

Applicants appreciate the thoroughness with which the Examiner has examined the above-identified application. Reconsideration is requested in view of the amendments above and the remarks below.

The claims of the application have been amended to clarify that the computing resources which are managed are server network computing resources, as recited in original dependent claims 2, 8 and 14. Claims 2, 8 and 14 have been cancelled as a result. Applicant has also added new dependent claims 19, 20 and 21 which combine the subject matter of original claims 5 and 6, original claims 11 and 12, and original claims 17 and 18, respectively.

Claims 1-18 stand rejected under 35 USC § 103 as being obvious from Berg U.S. Patent No. 5,872,911 in view of Choudhury et al. U.S. Patent No. 5,719,854. Applicants respectfully traverse this rejection.

Claims 1, 7 and 13

As amended, applicants' invention as recited in claims 1, 7 and 13 is directed to a method and associated computer program product and program of instructions for managing server network computing resources having a workload of a given type. The invention in particular a) collects real-time performance data regarding the server network computing resources running under the workload, b) analyzes the real-time performance data and the forecast to identify a critical server network computing resource, and c) automatically adjusts

a capacity of the server network computing resource to provide steady-state performance of the resource under the workload.

The Berg patent is directed to analysis of a telecommunication network carrier, such as a wireless cellular network system. The collection and analysis of data is of resource capacity on the telecommunication network. As stated in Berg, "Resource capacity data refers to the capacity of the telecommunications system to service calls." Berg, column 6, lines 19-20. Berg does not disclose or suggest the collection and analysis of data relating to server network computing resources running under a workload, as applicants' invention does. Berg is not even relevant or analogous art to managing server network computing resources, as applicants' claims are now directed.

The Examiner acknowledges "Berg does not explicitly teach automatically adjusting a capacity of the resource to provide steady-state performance of said resource under said workload." Office action, p.2. The Examiner then cites the Choudhury patent as disclosing this feature. However, the Choudhury patent is directed to the problems associated with circuit availability on circuit-switched telecommunication networks, and bandwidth available on broadband integrated-services digital networks. As with the Berg patent, in view of the claims as amended, the Choudhury patent is not even relevant or analogous art to the instant invention. Choudhury discloses only that the "resources" may be "links" or "switches" and the resource units may be "circuits" or "bandwidth" respectively. Choudhury, column 1, lines 36-38 and column 2, lines 20-24. The portion of Choudhury cited as disclosing that the computing resources comprise a server network, column 1, lines 48-49, simply does not do so. There is no disclosure or suggestion in Choudhury that the invention therein may be used

for managing server network computing resources, or adjusting capacity of the server network computing resource, as in the present invention.

Accordingly, the hypothetical combination of Berg and Choudhury does not render obvious the claimed invention to one of ordinary skill in the server network computing art since they do not deal with the subject matter of server network computing resources, and their combination (even if proper) does not arrive at applicants' claimed invention.

Claims 3, 9 and 15

Dependent claims 3, 9 and 15 add the subject matter of setting threshold values for the performance data and identifying the server network computing resource in accordance with the threshold values. The Examiner cites Berg at column 7, lines 49-59 as disclosing such. However, the thresholds refer to "resource capacity" which, as described previously, Berg discloses only as the capacity of the telecommunications system to service calls. This citation to Berg does not disclose server network computing resources, or any identification of server network computing resources. Claims 3, 9 and 15 are therefore not obvious from the combination of Berg and Choudhury.

Claims 4, 10 and 16

Claims 4, 10 and 16 recite notifying a user of the server network computing resources when the critical resource is a [server network computing] hardware resource, and notifying the user when the capacity of the [server network computing] hardware resource is adjusted. For this subject matter, the Examiner cites Berg at column 12, lines 12-13 and column 14, lines 3-4, and Choudhury at column 8, lines 52-55.

Berg discloses the display of "fault data" and "actual service impact data" to the user. There is no disclosure or suggestion in Berg that this refers to a server network computing hardware resource. Choudhury discloses that it uses "the blocking probability computer to make appropriate capacity adjustments to meet changes in customer demand." This "capacity" refers to Choudhury's disclosed "resource" which as stated above are links or switches for circuits or bandwidth, respectively, and not for server network computing hardware resources as in the present invention. Furthermore, there is no disclosure of notifying the user when the capacity of the resource is adjusted. The present invention as recited in claims 4, 10 and 16 is not rendered obvious from the cited art.

Claims 5, 11 and 17

Claims 5, 11 and 17 recite that there is initially providing additional [server network computing] hardware resources available to, but unused by, the server network computing resources. The Examiner cites for this subject matter the disclosures of Berg and Choudhury given for claims 4, 10 and 16. However, those portions of Berg and Choudhury do not suggest providing server network computing resources, and therefore do not render obvious the present invention defined by claims 5, 11 and 17.

Claims 6, 12 and 18

Claims 6, 12 and 18 specify that the additional hardware resources are CPUs, computer memory and/or computer disk storage. The Examiner takes the position that "it is well known to these skilled in the art that CPUs, computer memory and computer disk storage are all computer resources that are required for Berg and Choudhury's systems to perform their functions." Office action, p.3. Given that the cited art's "resources" are either

capacity of the telecommunications system to service calls (Berg) or links or switches for circuits or bandwidth, respectively, (Choudhury), there is no suggestion that such resources are CPUs, computer memory and/or computer disk storage of the type used in server network computing hardware. Applicants respectfully request that this "well known" subject matter be referenced in prior art if the Examiner continues this ground for rejection.

Claims 19, 20 and 21

Claims 19, 20 and 21 combine the subject matter of claims 5 and 6, original claims 11 and 12, and original claims 17 and 18, respectively, and are not obvious from the prior art for the reasons given above in connection with those claims.

It is respectfully submitted that the application has now been brought into a condition where allowance of the entire case is proper. Reconsideration and issuance of a notice of allowance are respectfully solicited.

Respectfully submitted,

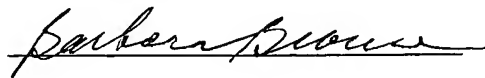


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